What is claimed is:

1. A method for sending a data packet, the method comprising:

receiving an original data packet characterized by a fixed-length packet format defining an address field and a data field, the original data packet carrying original data packet routing information in the address field and original data packet data information in the data field;

constructing a remnant packet characterized by the fixed-length packet format including a remnant packet data field and a remnant packet address field by inserting at least a portion of the original packet routing information in the remnant packet data field; and

sending the remnant packet.

2. The method of claim 1, wherein constructing a first remnant packet further comprises:

inserting a first portion of the original data packet data information in the remnant packet data field.

3. The method of claim 2, further comprising:

when the original data packet and a prior original data packet form part of a common message, inserting at least a portion of a prior original data packet data field in the remnant packet data field.

4. The method of claim 1, further comprising constructing a subsequent remnant packet characterized by the fixed-length packet format by inserting a second portion of the first data information in the data field of the subsequent remnant packet.

5. The method of claim 4, further comprising:

receiving a subsequent original data packet characterized by the fixed-length packet format, the subsequent original data packet carrying subsequent original data packet routing information in the address field; and

inserting at least a portion of the subsequent original packet routing information in the data field of the subsequent remnant packet.

6. The method of claim 1, wherein:

receiving an original data packet comprises receiving an original ATM cell including a VCI; and

constructing a remnant packet further comprises inserting the VCI from the original ATM cell in the data field of the remnant packet.

7. The method of claim 1, further comprising:

when the address field of the original data packet includes sufficient available space for subsequent routing of the original data packet in an intermediate network, sending the original data packet without constructing and sending the remnant packet.

8. The method of claim 1, further comprising setting a remnant packet flag in the remnant packet.

9. A method for receiving a data packet comprising:

receiving a current remnant packet characterized by a fixed-length packet format defining an address field and a data field, the current remnant packet carrying remnant routing information in the address field and remnant data information in the data field; and

building a reconstructed data packet characterized by the fixed-length packet format by:

identifying original data packet routing information contained in the data field of the current remnant packet; and

inserting the original data packet routing information in the address field of the reconstructed data packet.

10. The method of claim 9, wherein building a reconstructed data packet further comprises:

identifying original data packet data information contained in the data field of the current remnant packet; and

inserting at least a first portion of the original data packet data information in the data field of the reconstructed data packet.

11. The method of claim 10, further comprising storing at least a portion of original data packet data information from a prior remnant packet in the data field of the reconstructed data packet.

12. The method of claim 9, wherein building a reconstructed data packet further comprises:

when the current remnant packet and a prior remnant packet form part of a common message, storing at least a portion of prior remnant packet data information in the data field of the reconstructed data packet.

13. The method of claim 12 further comprising comparing the remnant routing information to stored packet routing information to determine when the prior remnant packet and the current remnant packet form part of the common message.

14. The method of claim 11, further comprising:

receiving a subsequent remnant packet;

inserting a first portion of data information from the data field of the subsequent remnant packet in the data field of the reconstructed data packet; and

constructing a second reconstructed data packet according to the fixed-length packet format by:

identifying subsequent original data packet routing information contained in the data field of the subsequent remnant packet;

inserting the subsequent original data packet routing information in the address field of the second reconstructed data packet; and

inserting at least a second portion of data information from the data field of the subsequent remnant packet in the data field of the second reconstructed data packet.

15. The method of claim 9, wherein receiving a first remnant packet comprises:

receiving a data packet;

determining if the data packet is a remnant packet; and

when the data packet is not a remnant packet, sending the data packet without building a reconstructed data packet.

16. The method of claim 9, wherein:

receiving a remnant packet comprises receiving a remnant ATM cell; and

constructing a reconstructed data packet comprises:

constructing a reconstructed ATM cell;

retrieving a VCI from the data field of the remnant ATM cell; and

inserting the VCI in the VCI field of the reconstructed ATM cell.

17. A communication network node comprising:

a receiver for receiving an original data packet characterized by a fixed-length packet format defining an original address field and an original data field; and

a processor coupled to said receiver and operable to construct a remnant packet according to the fixed-length packet format including a remnant address field and a remnant data field, by moving at least a portion of the original address field into the remnant data field.

18. The communication network node of claim 17, wherein the remnant data field further includes a first portion of the original data field, and further comprising a memory coupled to the processor for storing a second portion of the original data field.

19. The communication network node of claim 17, wherein the remnant data field comprises at least a portion of a prior original data packet.

20. The communication network node of claim 17, wherein said fixed-length packet format is ATM, and the remnant data field comprises at least a portion of a VCI from the original data packet.

21. The communication network node of claim 17, wherein the processor is operable to send the original data packet without first constructing a remnant packet when the original address field includes sufficient available space for subsequent routing in an intermediate network.

22. The communication network node of claim 17, wherein the remnant packet comprises a remnant packet flag.

23. A communication network node comprising:

a receiver for receiving a remnant packet characterized by a fixed-length packet format defining a remnant address field and a remnant data field, the remnant address field comprising remnant packet routing information and the remnant data field comprising original data packet routing information and original data packet data information; and

a processor operable to form a reconstructed data packet characterized by the fixed-length packet format including a reconstructed address field and a reconstructed data field, the reconstructed address field comprising original packet routing information from the remnant data field.

24. The communication network node of claim 23, wherein the reconstructed data field comprises at least a portion of the original data packet data information.

25. The communication network node of claim 23, wherein the processor is further operable to insert stored data information from a prior associated remnant packet in the reconstructed data field.

26. The communication network node of claim 23, wherein said receiver receives a subsequent remnant packet including a subsequent data field, and said

processor forms a subsequent reconstructed data packet according to the fixed-length packet format, including a subsequent reconstructed data field comprising original data packet data information from the remnant packet and at least a portion of the subsequent data field.

27. The communication network node of claim 23, wherein the processor is further operable to send the received data packet without constructing a reconstruction data packet when the received data packet is not a remnant packet.

28. The communication network node of claim 23wherein said remnant packet is an ATM cell, and said reconstructed data packet is an ATM cell comprising a VCI field including VCI information from the remnant data field..